

Sheldrake, Sean

From: Pradeep Mugunthan <pmugunthan@anchorqea.com>
Sent: Wednesday, March 04, 2015 3:04 PM
To: Dana Bayuk; Henning Larson (larsen.henning@deq.state.or.us) (larsen.henning@deq.state.or.us); Coffey, Scott (CoffeySE@cdmsmith.com); 'Gamache, Matthew' (GamacheM@cdmsmith.com); Lance Peterson (PetersonLE@cdm.com) (PetersonLE@cdm.com); Sheldrake, Sean
Cc: Michael Riley; John Edwards; John Renda; Ben Hung; Bob Wyatt; Patty Dost; Binglei Gong
Subject: Gasco: Follow-up from Groundwater Modeling Meeting on 2/25
Attachments: Precip_Stage_for_Recharge_Analysis.pdf

Dana,

Attached please find the follow-up information we discussed during the modeling conference call on 2/25. The approach for recharge evaluation using this information is described below:

1. Page 1 provides the daily precipitation in winter and spring of 2014. The steady state simulation will be calibrated to water level data from 3/11/2014. Recharge will be setup based on the average conditions from 2/10 to 3/11/14, which was a period of frequent rainfall events. The calibrated recharge value will be compared to the average precipitation over this period as a reality check on the percent of precipitation that contributed to recharge.
2. Page 2 provides the monthly total volume of water pumped from the LNG basin and the monthly total precipitation. Based on the time series of monthly volumes it can be noted that lowest flows to the LNG basin occur in August and September of each year, which also corresponds to the period of least recharge. We used the average total volume in August and September over the period of record as an estimate of the baseflow (approximately 5 gallons per minute or 225,000 gallons per month - red horizontal line in the figure). Calibration of the drain boundary conductance will be carried out over the calibration period to achieve a drain boundary outflow of approximately 5 gpm. Model predicted drain boundary outflows over the wet period steady simulation in March will be compared to the corresponding LNG basin flow volume as an additional check.

Can you please let us know if DEQ approves the approach above?

Thanks.

Pradeep

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